Prevalence and risk factors for HPV in HIV-positive young women receiving their first HPV vaccination.

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Authors Kahn, JA, Burk, RD, Squires, KE, Kapogiannis, BG, Rudy, B, Xu, J, Gonin, R, Liu, N, Worrell, C, Wilson, CM

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Abstract

BACKGROUND: The objectives of this study were to describe the prevalence and risk factors for HPV infection among HIV-infected young women receiving their first quadrivalent HPV (HPV-6, -11, -16, and -18) vaccine dose.

METHODS: We recruited 16- to 23-year-old women from 14 sites for an HPV vaccine trial. At the first visit, they completed a questionnaire and were tested for cervicovaginal HPV DNA (41 types) and HPV serology (4 vaccine types). Factors associated with any HPV, type-specific HPV, and high-risk (cancer-associated) HPV infections were identified using univariate and multivariable logistic regression.

RESULTS: The mean age of participants (N = 99) was 21.4 years, 30.3% were on antiretroviral therapy, 74.7% were positive for ≥1 HPV DNA type, 53.5% for ≥1 high-risk type, 12.1% for HPV-16, and 5.1% for HPV-18. Most were HPV DNA negative and seronegative for HPV-16 (55.6%) and HPV-18 (73.7%); 45.5% were HPV DNA negative and seronegative for both HPV-16 and -18. Three variables were associated with high-risk HPV DNA in multivariable analysis: non-Hispanic black versus Hispanic ethnicity (adjusted odds ratio [AOR]: 7.06, 95% CI: 1.63 to 30.5), HIV viral load ≥ 400 versus <400 copies/mL (AOR: 3.47, 95% CI: 1.28 to 9.43), and frequency of vaginal sex in the past 90 days (AOR: 5.82, 95% CI: 1.30 to 26.11 for ≥6 vs 0 times).
CONCLUSIONS: The prevalence of ≥1 HPV type was high in these young women, demonstrating the importance of vaccinating before sexual initiation. However, most women were HPV DNA negative and seronegative for high-risk vaccine-type HPV infection, supporting vaccination of sexually experienced HIV-positive young women.

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